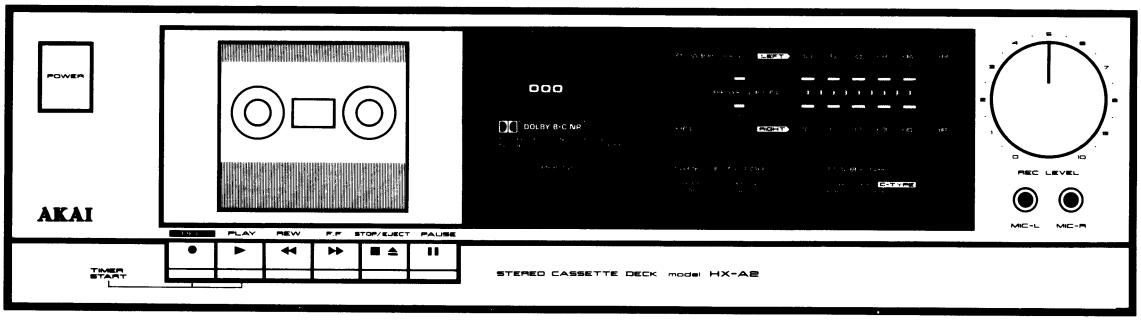
HX-A2

AKAI SERVICE MANUAL



STEREO CASSETTE DECK

MODEL HX-A2

ABBREVIATIONS FOR SERVICE MANUAL
MODEL HX-A2

ABBREVIATION	EXPLANATION
ADJ	ADJust (ADJustment)
DIN	Deutsche Industrie Normen
FREQ.	FREQuency
IND	INDicator
LED	Light Emitting Diode
MIC	MICrophone
MPX	MultiPleX
PCB	Printed Circuit Board
S/N	Signal to Noise (Ratio)
SW	SWitch
TR	TRansistor

ABBREVIATIONS FOR SERVICE MANUAL
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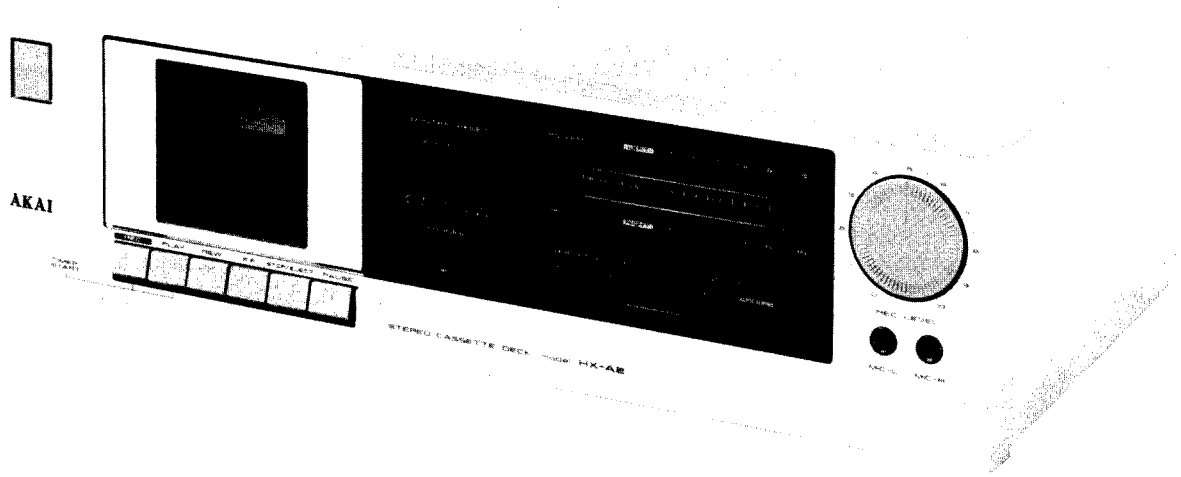


STEREO CASSETTE DECK

MODEL HX-A2

SECTION 1 SERVICE MANUAL 3
SECTION 2 PARTS LIST 13

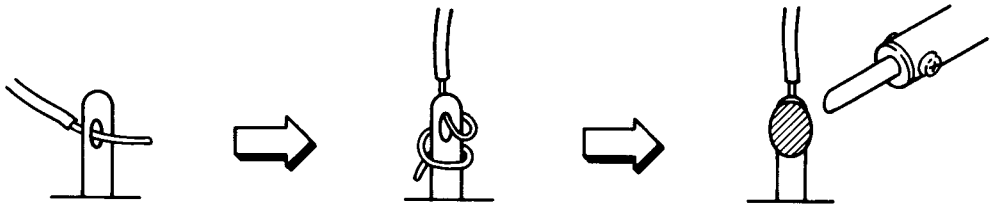
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

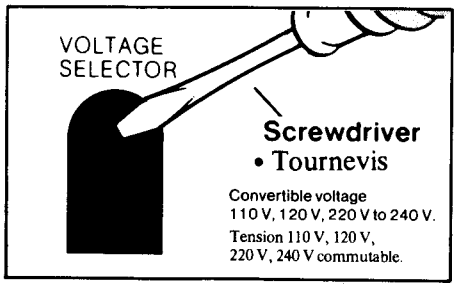
1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

VOLTAGE CONVERSION

Models for Canada, USA, Europe, UK and Australia are not equipped with this facility. Each machine is preset at the factory according to destination, but some machines can be set to 110V, 120V, 220V, or 240V as required.
If your machine's voltage can be converted:
Before connecting the power cord, turn the VOLTAGE SELECTOR located on the rear panel with a screwdriver until the correct voltage is indicated.



CYCLE CONVERSION

Cycle Conversion are not necessary since HX-A2 use a DC MOTOR.

SECTION 1

SERVICE MANUAL

TABLE OF CONTENTS

I. SPECIFICATIONS 4
II. DISMANTLING OF UNIT 5
III. CONTROLS 6
IV. PRINCIPAL PARTS LOCATION 7
V. MECHANICAL ADJUSTMENT 8
5-1 PINCH ROLLER PRESSURE MEASUREMENT 8
5-2 WINDING TORQUE MEASUREMENT IN EACH MODE 8
5-3 TAPE SPEED ADJUSTMENT 8
5-4 REC/PB HEAD AZIMUTH ADJUSTMENT 8
5-5 JOINT REC ADJUSTMENT 9
VI. AMPLIFIER ADJUSTMENT 10
6-1 PRE AMP ADJUSTMENT POINT 10
6-2 PRE AMP ADJUSTMENT CHART 11
VII. DC RESISTANCE OF HEADS 12
VIII. PC BOARD TITLE AND IDENTIFICATION NUMBERS 12

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

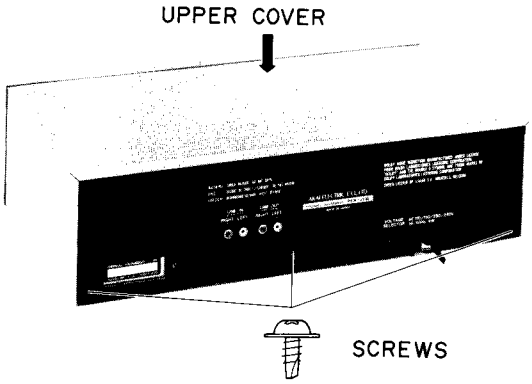
TRACK SYSTEM	4 Track 2 Channel Stereo System
TAPE	Philips Type Cassette
MOTOR	Electronically speed controlled DC Motor for capstan drive x 1
HEADS	High Density head for recording/playback x 1 Erase head x 1
TAPE WINDING TIME	100 sec. Using a C-60 cassette tape
WOW & FLUTTER	0.05% WRMS, 0.12% WTD (DIN)
DISTORTION	0.7% (Metal)
FREQUENCY RESPONSE	Metal 30Hz to 17,000Hz ± 3dB CrO_2 30Hz to 16,000Hz ± 3dB Normal 30Hz to 15,000Hz ± 3dB
S/N	56dB (Metal Tape) Dolby B ON: Improves up to 5dB at 1kHz, 10dB above 5kHz Dolby C ON: Improves up to 15dB at 500Hz, 20dB at 1kHz to 10kHz
INPUT SENSITIVITY/IMPEDANCE	LINE 70 mV/47 kohms DIN 5 mV/10 kohms (HX-A2-G type) MIC 0.25 mV/5 kohms
OUTPUT SENSITIVITY/IMPEDANCE	LINE 380 mV/1 kohms DIN 380 mV/1 kohms (HX-A2-G type) PHONES 0.3 mW (at 8 ohms)/56 ohms
POWER REQUIREMENTS	120V, 60Hz for USA and Canada 220V, 50Hz for Europe except UK 240V, 50Hz for UK and Australia 110V/120V/220V/240V, 50/60Hz switchable for other countries
DIMENSIONS	440(W) x 115(H) x 258(D) mm (17.3 x 4.5 x 10.2 inches)
WEIGHT	3.3kg (7.3 lbs)

* For improvement purposes, specifications and design are subject to change without notice.
* Noise Reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

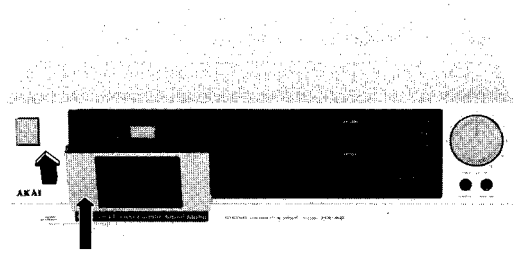
II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

3

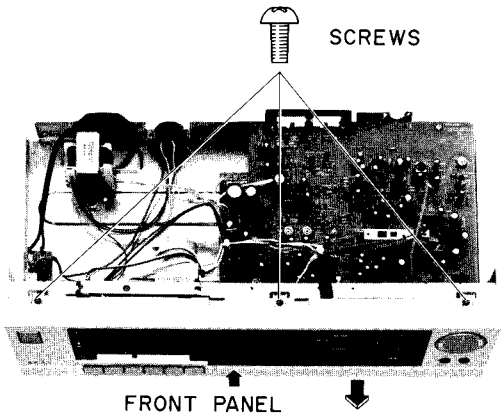


1

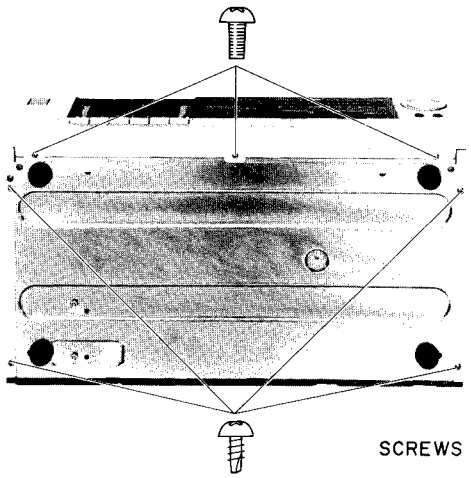


Push EJECT BUTTON and slide LID in direction shown.

4



2



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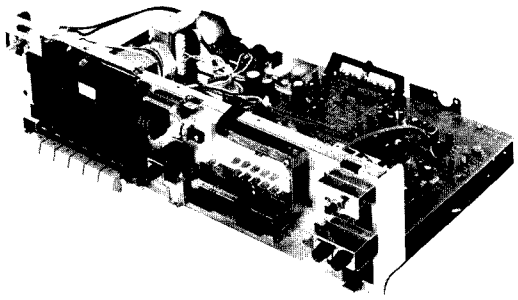


III. CONTROLS

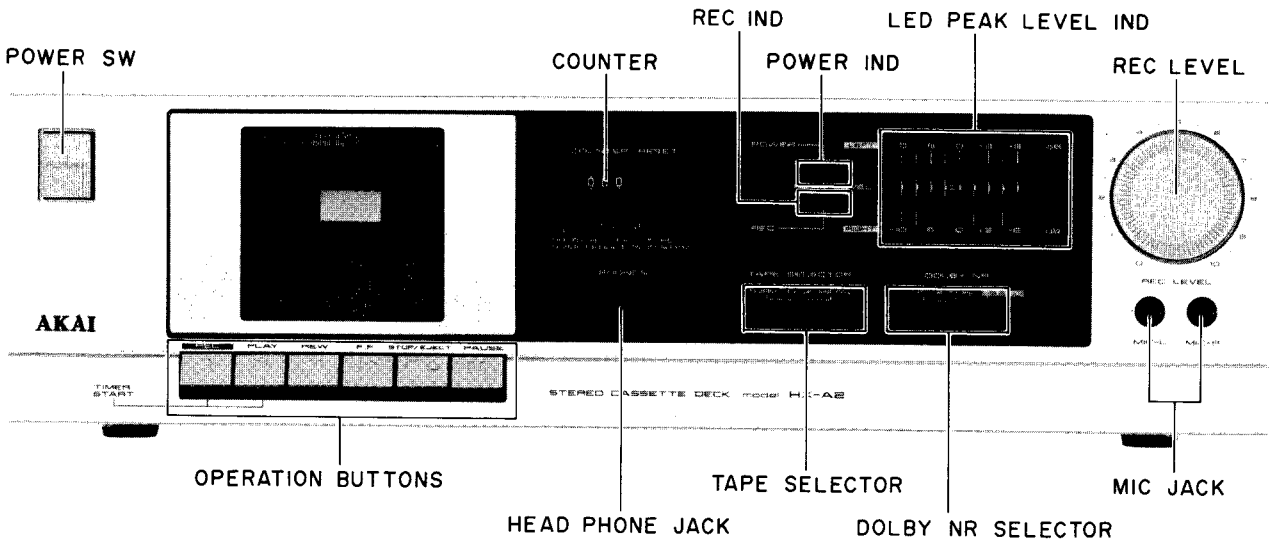


Fig. 3-1

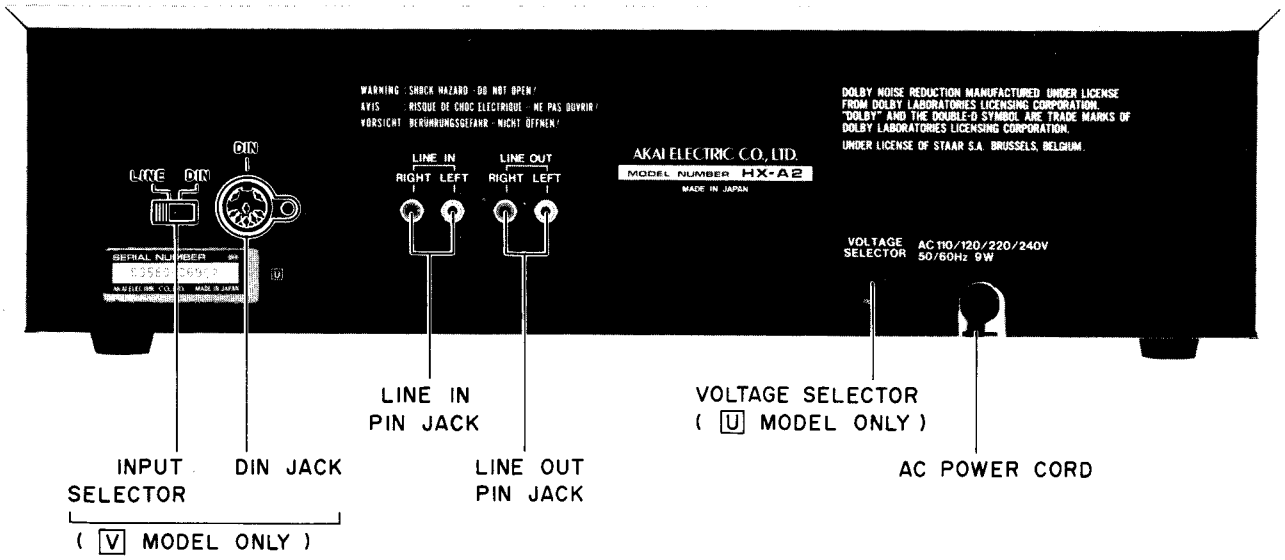


Fig. 3-2

IV. PRINCIPAL PARTS LOCATION

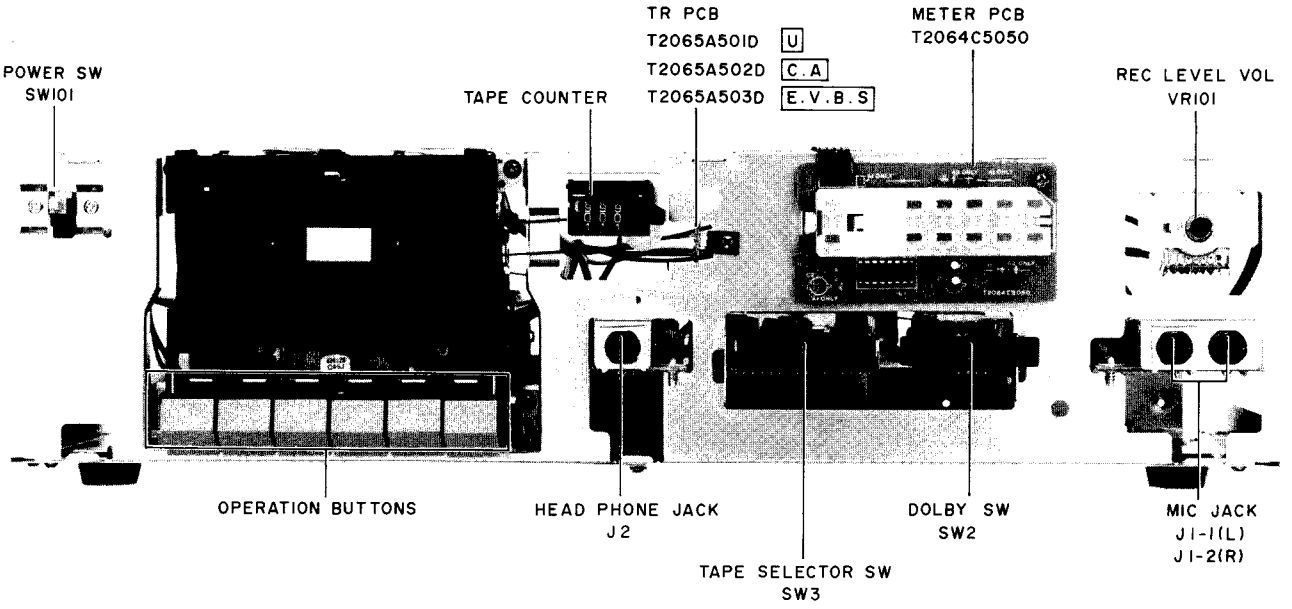


Fig. 4-1 Front View

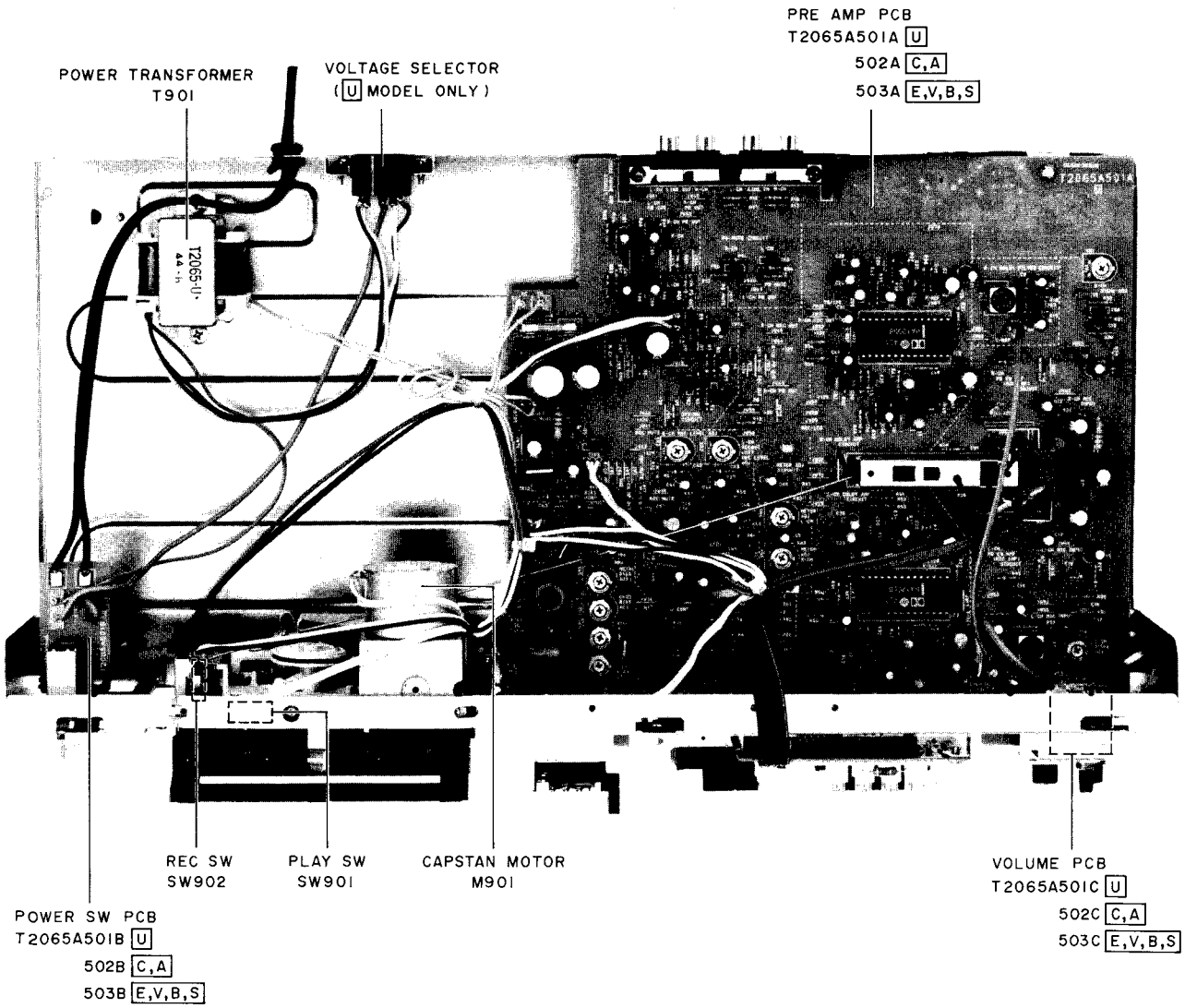


Fig. 4-2 Top View

V. MECHANICAL ADJUSTMENT

5-1 PINCH ROLLER PRESSURE MEASUREMENT (Refer to Fig. 5-1)

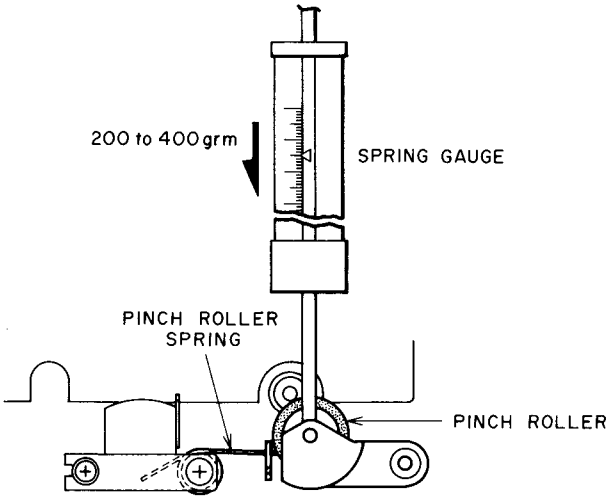


Fig. 5-1

Put in PLAY mode. Push pinch roller arm down with the spring gauge, push the pinch roller 1 to 2 mm from the Capstan and release slowly. Read the spring gauge at the moment the pinch roller touches the capstan and begins to rotate. Specified contact pressure measurement of 200 to 400 grm. If there is no measurement obtained, Adjust or Replace the pinch roller spring.

5-2 WINDING TORQUE MEASUREMENT IN EACH MODE (Refer to Fig. 5-2)

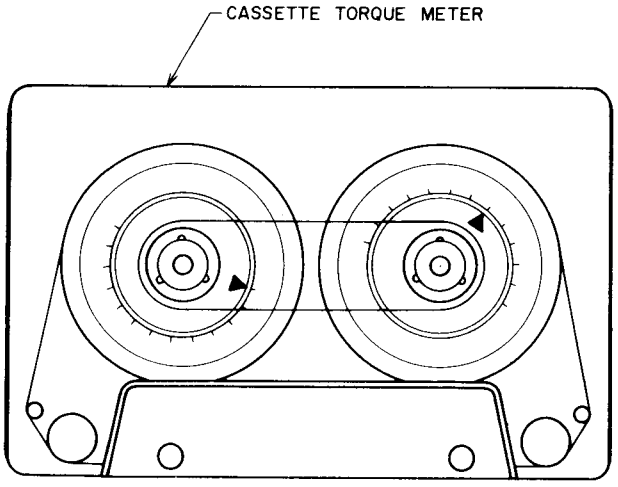


Fig. 5-2

Insert a cassette torque meter (AJ-751179) and measure in each mode. For Fast Foward and Rewind, measure at the end of the tape when the tape has stopped running.

PLAY mode

Take up Torque: 35 to 75 grm-cm

Back tension torque: 1 to 6 grm-cm

FAST FORWARD, REWIND mode

Take up Torque: 70 to 160 grm-cm

5-3 TAPE SPEED ADJUSTMENT (Refer to Fig. 5-3)

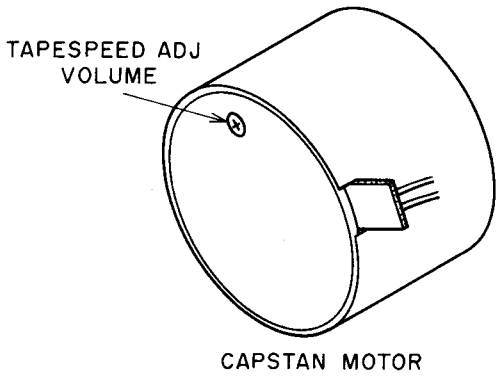


Fig. 5-3

Connect a frequency Counter to Line output terminals. Play Back a 1,000Hz Tape Speed Test Tape(AT-750774) or 3,150Hz Tape Speed Test Tape (AT-750774) and adjust a Tape Speed Adjustment Volume (see Fig. 3-3) to obtain a tape speed of 1,000Hz ± 10Hz, or 3,150 ± 30Hz.

5-4 REC/RB HEAD AZIMUTH ADJUSTMENT (Refer to Fig. 5-4)

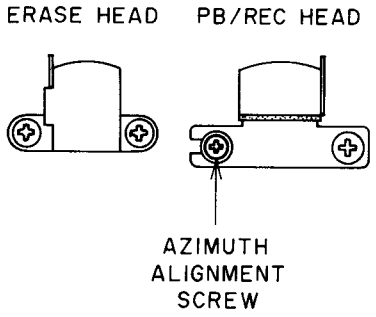


Fig. 5-4

Play Back a 10kHz Azimuth Alignment Tape (AT-750778) and Adjust the Azimuth Alignment Screw, until the output levels of both channels are maximum. After Adjustment, Paintlock the Azimuth Alignment Screw.

5-5 JOINT REC ADJUSTMENT

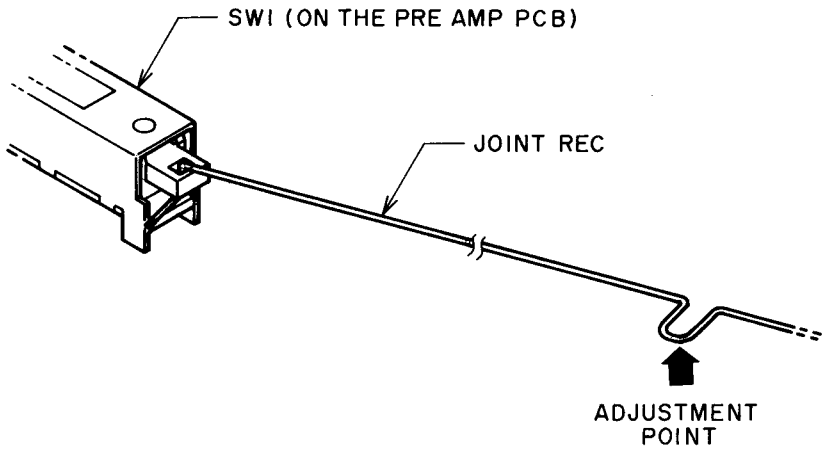


Fig. 5-5

Adjust adjustment point of JOINT REC so that SW1 is pulled completely at REC mode, it is released at PB mode.

VI. AMPLIFIER ADJUSTMENT

6-1 PRE AMP ADJUSTMENT POINT

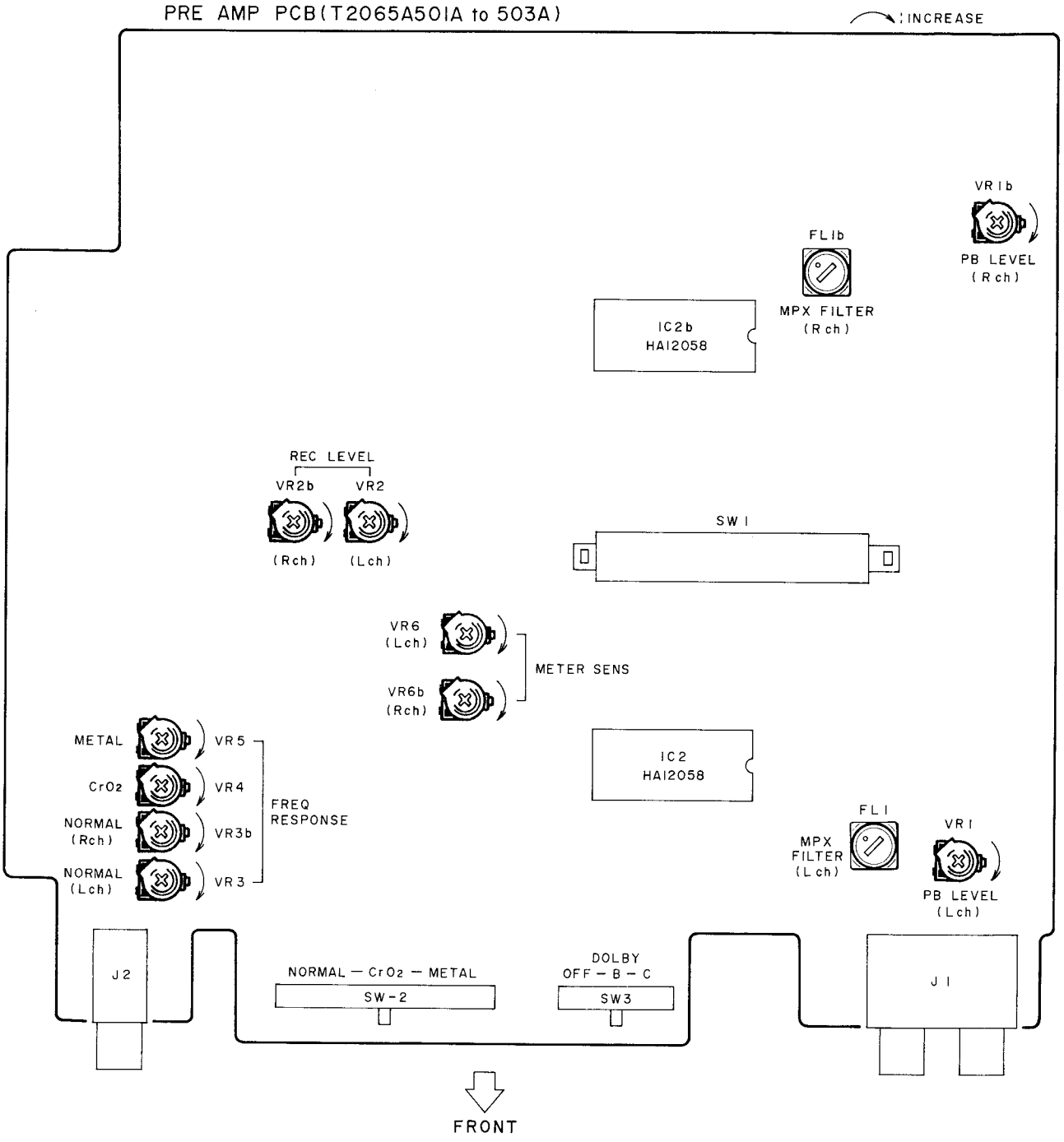


Fig. 6-1

6-2 PRE AMP ADJUSTMENT CHART

Step	Adjustment Item	Test Tape Supply signal	Mode	Adjustment	Result	Remarks
1	PB LEVEL	315Hz or 333Hz	PB	VR 1 (Lch) VR 1b (Rch)	−6.1 ± 0.5 dBm −6.6 ± 0.5 dBm	
2	NORMAL POSITION FREQUENCY RESPONSE	NORMAL Blank Tape 1kHz, 10kHz −26.0dBm	REC/PB	VR 3 (Lch) VR 3b (Rch)	1kHz, 10kHz Flat ± 0.3dBm	
3	CrO_2 POSITION FREQUENCY RESPONSE	CrO_2 Blank Tape 1kHz, 10kHz −26.0dBm	REC/PB	VR 4	1kHz, 10kHz Flat ± 0.8dBm	
4	METAL POSITION FREQUENCY RESPONSE	METAL Blank Tape 1kHz, 10kHz −26.0dBm	REC/PB	VR5	1kHz, 10kHz Flat ± 0.8dBm	
5	REC LEVEL	NORMAL Blank Tape 1kHz, −6.0dBm	REC/PB	VR 2 (Lch) VR 2b (Rch)	−6.0 ± 0.5 dBm	
6	METER SENSITIVITY	1kHz, −2dBm (606mV)	REC	VR 6 (Lch) VR 1b (Rch)	OVU LED BRIGHTLY	OVU = 606mV
7	MPX Filter	19kHz	REC	FL 1 (Lch) FL 1b (Rch)	OUTPUT Minimum	Less than −30dBm

NOTES: 1. All adjustments are without Dolby.

2. Use the following cassette measuring tapes:

NORMAL TAPE : Maxell UDI C-60
CrO_2 TAPE : TDK SA C-60
METAL TAPE : TDK MA C-60

3. Refer to Fig. 6-1 for the adjustments.

VII. DC RESISTANCE OF HEADS

Description	Name	DC Resistance
PB/REC Head	HY4247199VK	320 ohms ± 20%
Erase Head	HJ213270	3.5 ohms

VIII. PC BOARD TITLES AND IDENTIFICATION NUMBERS

PC Board Title	PC Board Number	Remarks
PRE AMP PC BOARD	T2065A501A	U
	T2065A502A	C, A
	T2065A503A	E, V, B, S
METER PC BOARD	T2064C5050	
TR PC BOARD	T2065A501D	U
	T2065A502D	C, A
	T2065A503D	E, V, B, S
POWER SW PC BOARD	T2065A501B	U
	T2065A502B	C, A
	T2065A503B	E, V, B, S
VOLUME PC BOARD	T2065A501C	U
	T2065A502C	C, A
	T2065A503C	E, V, B, S

SECTION 2

PARTS LIST

TABLE OF CONTENTS

RECOMMENDED SPARE PARTS 15
1. MECHA AKI-91FMF BLOCK 16
2. PRE AMP PC BOARD BLOCK 17
3. METER PC BOARD BLOCK 17
4. ASSEMBLY BLOCK 18
5. FINAL ASSEMBLY BLOCK 19
INDEX 20

Resistors and Capacitors which are not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure

This number corresponds with the Figure Number

b) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

SP (Service Parts) Classification

This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

RECOMMENDED SPARE PARTS

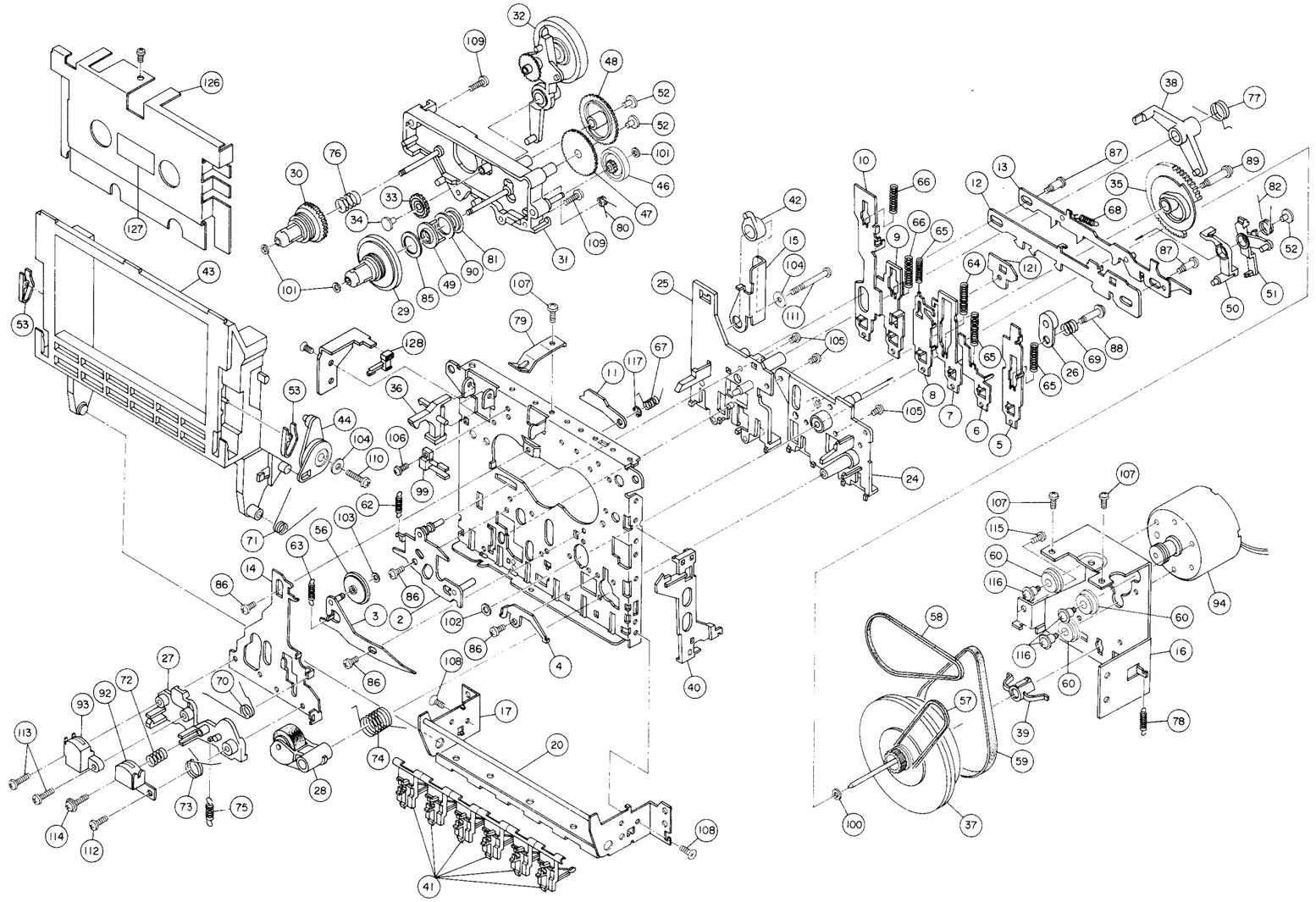
Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

No.	PARTS NO.	DESCRIPTION
1	BL-712799	PINCH ROLLER ARM ASSY
2	BM-713180	⚠ MOTOR (W/PULLEY) ASSY
3	BR-712802	SUPPLY REEL ASSY
4	BR-712801	TAKE-UP REEL ASSY
5	BT-353299	⚠ TRANS POWER T2065 (A,C)
6	BT-353301	⚠ TRANS POWER T2065 (B,S)
7	BT-353300	⚠ TRANS POWER T2065 (E,V)
8	BT-353298	⚠ TRANS POWER T2065 (U)
9	ED-353292	D LED GL-9HY24 YELLOW
10	ED-353290	D LED GL-9NG24 GREEN
11	ED-353291	D LED GL-9PR24 RED
12	ED-349662	D SILICON DS135E-FA6 100/1.0A
13	ED-301911	D SILICON H DS448
14	ED-331198	D ZENER H HZ3 A1
15	ED-348055	D ZENER V HZ12B-S27
16	EF-602550	⚠ FUSE SEMKO T 250V 1.25A (EXCEPT C,A)
17	EF-308847	⚠ FUSE TSC 125V 1.60A (C,A)
18	EH-353297	FILTER DOLBY FX-100A
19	EI-349590	IC BA3280EC
20	EI-349196	IC HA12058
21	EI-353289	IC IR2E27A
22	EI-337228	IC M5218L0
23	ES-337902	⚠ SW PUSH SDLD1P 01-1
24	ES-305733	⚠ SW SELECTOR HXW0131-260 01-4 (U)
25	ES-713178	SW LSA-1120-YN
26	ES-713179	SW LSA-1123-37
27	ES-353708	SW SLIDE SSY323
28	ES-353295	SW SLIDE SSY363
29	ES-354557	SW SLIDE 00220859
30	ES-353310	SW SLIDE 01220126
31	ET-348931	TR 2SB774 R,S,T
32	ET-331279	TR 2SC1843 P,F SNP
33	ET-308977	TR 2SC2274K F
34	ET-328578	TR 1SC2320 E,F
35	ET-328558	TR 2SC2320 G
36	ET-349080	TR 2SC3382 S,T
37	ET-349081	TR 2SC3383 S,T
38	ET-349608	TR 2SC3383 T,U
39	ET-354083	TR 2SD1189 Q,R
40	ET-353316	TR 2SD313 D,E
41	EV-337995	R S-FIX H RVF8P01 3P 103
42	EV-337996	R S-FIX H RVF8P01 3P 104
43	EV-337993	R S-FIX H RVF8P01 3P 203
44	EV-337861	R S-FIX H RVF8P01 3P 302
45	EV-338588	R S-FIX H RVF8P01 3P 503
46	EV-348314	VR ROTARY 16P20X3C A503
47	HE-337047	HEAD E HJ213270 C
48	HP-712824	HEAD R/P HY424528 SVK
49	MB-712818	BELT AUTO
50	MB-712820	BELT DRIVE
51	MB-712819	BELT FR
52	MB-351605	BELT 0.8×D593 CRHS65
53	MC-353312	COUNTER MK395-043 (BLACK)
54	MI-712813	GEAR AUTO
55	MI-711710	GEAR C
56	MI-712814	GEAR CAM AUTO
57	MI-712804	GEAR FF

SYMBOL FOR DESTINATION

A : AAL (U.S.A)
B : UK (England)
C : CSA (Canada)
E : CEE (Europe)
S : SAA (Australia)
U : U/T (Universal Area)
V : VDE (West Germany)

MECHA AKI-91FMF (9V) BLOCK



1. MECHA AKI-91FMF (9V) BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-1	BB-353302	MECHA BLK AKI-91FMF (9V)
1-24	MV-712797	HOLDER LEVER (A) ASSY
1-28	BL-712799	PINCH ROLLER ARM ASSY
1-29	BR-712801	TAKE-UP REEL ASSY
1-30	BR-712802	SUPPLY REEL ASSY
1-32	MI-712803	CLUTCH ARM ASSY
1-33	MI-712804	GEAR FF
1-35	MI-711710	GEAR C
1-36	ML-712806	REC SENSOR
1-37	BF-712807	FLYWHEEL ASSY
1-39	MZ-712808	HOLDER CAPSTAN
1-40	ML-712809	LEVER EJECT
1-43	TC-712810	LID FRAME
1-44	TC-712811	DAMPER ASSY
1-46	MI-712812	PULLEY AUTO
1-47	MI-712813	GEAR AUTO
1-48	MI-712814	GEAR CAM AUTO
1-49	MI-712815	CLUTCH AUTO
1-53	ZG-712816	CLAMP CASSETTE
1-56	MI-712817	IDLER PLAY
1-57	MB-712818	BELT AUTO
1-58	MB-712819	BELT FR
1-59	MB-712820	BELT DRIVE
1-72	ZG-749268	SP HEAD
1-73	ZG-712821	SP PINCH ROLLER
1-79	ZG-712822	SP PACK
1-85	TC-712823	FELT AUTO CLUTCH
1-92	HP-712824	HEAD R/P HY424528 SVK
1-93	HE-337047	HEAD E HJ213270 C
1-94	BM-713180	⚠ MOTOR (W/PULLEY) ASSY (M901)
1-99	ES-713178	SW LSA-1120-YN (SW901)
1-112	ZS-536488	BID20×08STL CMT
1-113	ZS-749292	BID20×8.5STL CMT
1-114	ZS-749293	BID20×09STL CMT TW
1-126	TC-349493	DECORATION PLATE
1-127	SZ-645186	REFLECTOR
1-128	ES-713179	SW LSA-1123-37 (SW902)

NOTE: Parts will not be supplied if they are not listed in the Parts List, even if they appear on the assembling illustrations with reference No.

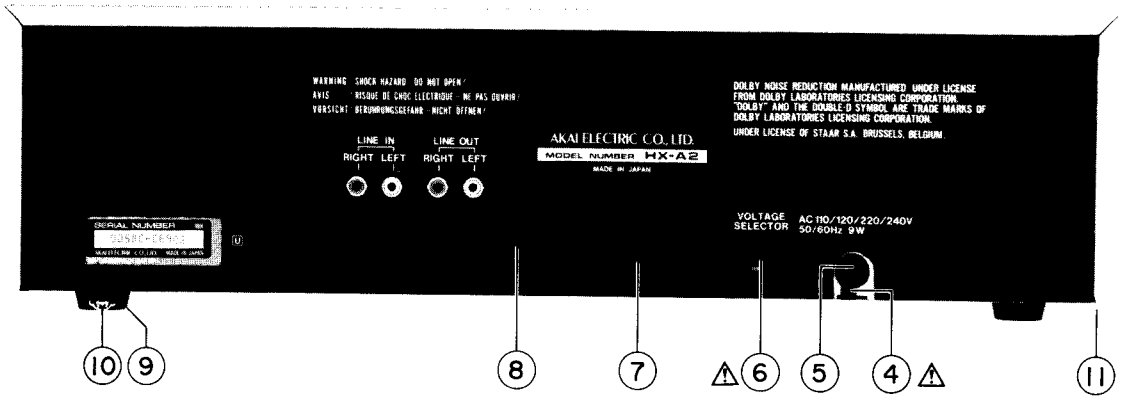
2. PRE AMP PC BOARD BLOCK

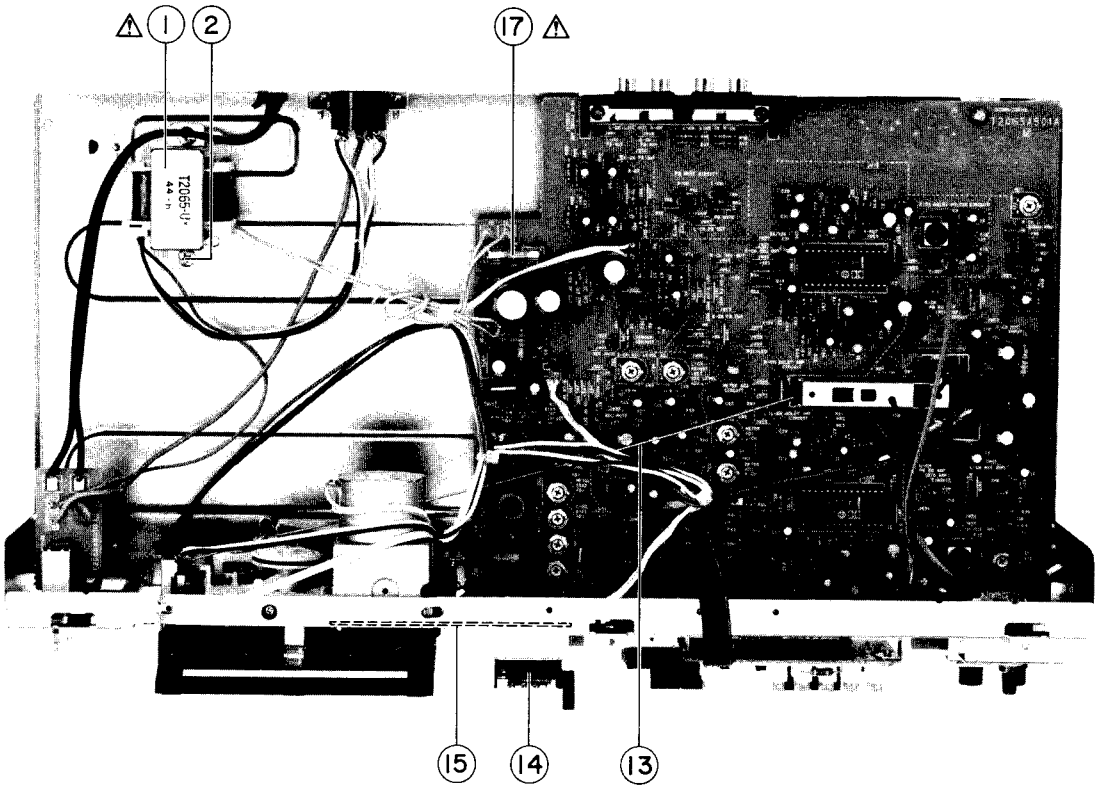
REF. NO.	PARTS NO.	DESCRIPTION
2-1U	BA-T2065A020A	PC PRE AMP BLK HX-A2 (U)
2-1C	BA-T2065A020B	PC PRE AMP BLK HX-A2 (C,A)
2-1E	BA-T2065A020D	PC PRE AMP BLK HX-A2 (E,B,S)
2-1V	BA-T2065A020C	PC PRE AMP BLK HX-A2 (V)
		PRE AMP PC BOARD
2-IC1	EI-349590	IC BA3280EC
2-IC2	EI-349196	IC HA12058
2-IC3	EI-337228	IC M5218L0
2-TR1	ET-349081	⚠ TR 2SC3383 S,T
2-TR2	ET-348931	TR 2SB774 R,S,T
2-TR3,4	ET-328578	TR 2SC2320 E,F
2-TR5,6	ET-349608	TR 2SC3383 T,U
2-TR7	ET-349080	TR 2SC3382 S,T
2-TR8,9	ET-349081	TR 2SC3383 S,T
2-TR10,11	ET-308977	TR 2SC2274K F
2-TR12	ET-328558	TR 2SC2320 G
2-TR13	ET-353316	TR 2SD313 D,E
2-TR14	ET-328578	TR 2SC2320 E,F
2-TR201	ET-331279	TR 2SC1843 P,F SNP (V)
2-D1,2	ED-349662	⚠ D SILICON DS135E-FA6 100/1.0A
2-D3	ED-348055	⚠ D ZENER V HZ12B-S27
2-D4	ED-349662	D SILICON DS135E-FA6 100/1.0A
2-D5to7	ED-301911	D SILICON H DS448
2-D8	ED-349662	D SILICON DS135E-FA6 100/1.0A
2-D9	ED-331198	D ZENER H HZ3 A1
2-SW1	ES-353310	SW SLIDE 01220126
2-SW2	ES-353708	SW SLIDE SSY323
2-SW3	ES-353295	SW SLIDE SSY363
2-SW201	ES-354557	SW SLIDE 00230859 (V)
2-VR1	EV-338588	R S-FIX H RVF8P01 3P 503
2-VR2	EV-337993	R S-FIX H RVF8P01 3P 203
2-VR3	EV-337996	R S-FIX H RVF8P01 3P 104
2-VR4	EV-337993	R S-FIX H RVF8P01 3P 203
2-VR5	EV-337861	R S-FIX H RVF8P01 3P 302
2-VR6	EV-337995	R S-FIX H RVF8P01 3P 103
2-T1	EO-353311	COIL OSC 32-5021-12 100KHZ
2-FL1	EH-353297	FILTER DOLBY FX-100A
2-FL2	EO-337044	COIL TUN 1 102AZ-005
2-FL3	EO-347162	COIL FIX 1 L-8 103J
2-FL4	EO-315758	COIL TUN 1 100Z-431 100.00KHZ
2-R1	ER-353317	R OMF H SNP FS 1W 681J
2-R33	ER-351221	R OMF H SNP FS 1W 221J
2-R78	ER-333698	R CB H S15 FS RDS 1/2W 821J
2-C11,13	EC-516723	C STY V 271K 50DC
2-C59	EC-345817	C PP V F10 APH 272J 630DC
2-J1	EJ-347631	PHONE J HLJ0527-3034
2-J2	EJ-343380	PHONE J 3P HLJ0541-040 6.3
2-J3	EJ-347664	PIN J YKC21-5053 P 4P
2-J201	EJ-698051	DIN J CS707-1-1 P 5P (V)
		POWER SW PC BOARD
2-SW101	ES-337902	⚠ SW PUSH SDLD1P 01-1
2-C101U	EC-320548	⚠ C CE V F 103Z 250AC (U,C,A)
2-C101E	EC-338411	⚠ C CE V FZ 103P 400AC(E,V,B,S)
		VOLUME PC BOARD
2-VR101	EV-348314	VR ROTARY 16P20×3C A503
		TR PC BOARD
2-TR101	ET-354083	⚠ TR 2SD1189 Q,R

3. METER PC BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
3-IC1	EI-353289	IC IR2E27A
3-D1to3	ED-353290	D LED GL-9NG24 GREEN
3-D4to6	ED-353291	D LED GL-9PR24 RED
3-D7	ED-353292	D LED GL-9HY24 YELLOW
3-R1	ER-315389	R CB H S15 FS RDS 1/2W 470J

ASSEMBLY BLOCK

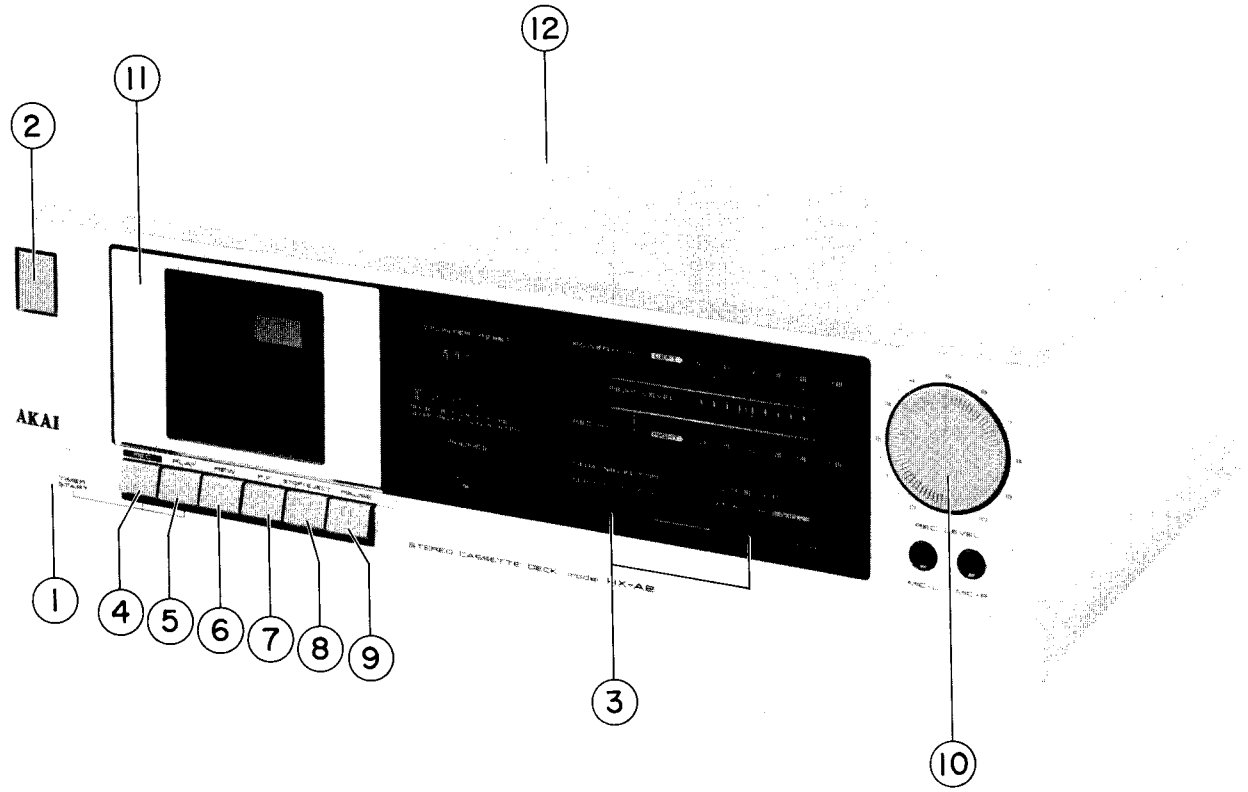




4. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
4-1U	BT-353298	⚠ TRANS POWER T2065 (U)
4-1C	BT-353299	⚠ TRANS POWER T2065 (A,C)
4-1E	BT-353300	⚠ TRANS POWER T2065 (E,V)
4-1B	BT-353301	⚠ TRANS POWER T2065 (B,S)
4-2	ZS-304022	ST PNA40x06STL CMT
4-3x	ZW-413188	N40STL CMT 1
4-4U	EW-306428	⚠ AC CORD 2 CORES KP-700A, VFF U/T (U)
4-4C	EW-305691	⚠ AC CORD 2 CORES KP-8, SPT-1 UC (C,A)
4-4E	EW-336923	⚠ AC CORD 2 CORES KP-419C, LTCE-2F EV (E,V)
4-4B	EW-346249	⚠ AC CORD 2 CORES LCFL2x0.75 B (B)
4-4S	EW-347898	⚠ AC CORD 2 CORES VM-0436, LCFL S (S)
4-5	EZ-631945	STRAIN RELIEF SR-4N-4
4-6	ES-305733	⚠ SW SELECTOR HXW0131-260 01-4 (U) (VS901)
4-7U	SP-351610F	PANEL REAR HX-A2 (U)
4-7C	SP-351610G	PANEL REAR HX-A2 (C,A)
4-7E	SP-351610H	PANEL REAR HX-A2 (E)
4-7V	SP-351610J	PANEL REAR HX-A2 (V)
4-7B	SP-351610K	PANEL REAR HX-A2 (B,S)
4-8	ZS-352120	T2BR30x08STL BCM C080
4-9	SA-202118	FOOT
4-10	ZS-331567	T2BR30x08STL CMT C080
4-11	ZS-325495	T2BR30x06STL CMT
4-12x	ZW-698308	RV NYL30x055 BL (V)
4-13	MZ-353159B	JOINT REC (B)
4-14	MC-353312	COUNTER MK395-043 (BLACK)
4-15	MB-351605	BELT 0.8xD593 CRHS65
4-16x	ZW-305013	RV POP32 (A)
4-17U	EF-602550	⚠ FUSE SEMKO T 250V 1.25A (U,E,V,B,S) (F1)
4-17C	EF-308847	⚠ FUSE TSC 125V 1.60A (C,A) (F1)

FINAL ASSEMBLY BLOCK



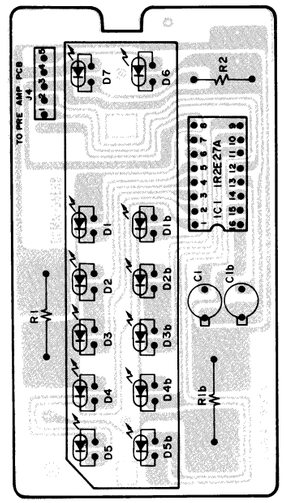
5. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
5-1	BD-351609C	PANEL FRONT HX-A2
5-1P	BD-351609D	PANEL FRONT HX-A2-P
5-1B	BD-351609F	PANEL FRONT HX-A2-B
5-2	SK-343017C	KNOB POWER (2)
5-2P	SK-343017B	KNOB POWER-P
5-2B	SK-343017F	KNOB POWER-B
5-3	SK-351613A	KNOB SLIDE (W/P)
5-3B	SK-351613B	KNOB SLIDE-B
5-4	SK-349496G	KNOB OPERATION (B) REC
5-4P	SK-349496N	KNOB OPERATION (C) REC
5-4B	SK-349496A	KNOB OPERATION REC
5-5	SK-349496H	KNOB OPERATION (B) PLAY
5-5P	SK-349496P	KNOB OPERATION (C) PLAY
5-5B	SK-349496B	KNOB OPERATION PLAY
5-6	SK-349496J	KNOB OPERATION (B) REW
5-6J	SK-349496Q	KNOB OPERATION (C) REW
5-6B	SK-349496C	KNOB OPERATION REW
5-7	SK-349496K	KNOB OPERATION (B) FF
5-7P	SK-349496R	KNOB OPERATION (C) FF
5-7B	SK-349496D	KNOB OPERATION FF
5-8	SK-349496L	KNOB OPERATION (B) STOP
5-8P	SK-349496S	KNOB OPERATION (C) STOP
5-8B	SK-349496E	KNOB OPERATION STOP
5-9	SK-349496M	KNOB OPERATION (B) PAUSE
5-9P	SK-349496T	KNOB OPERATION (C) PAUSE
5-9B	SK-349496F	KNOB OPERATION PAUSE
5-10	SK-345375H	KNOB VOLUME (F)
5-10P	SK-345375J	KNOB VOLUME (G)
5-10B	SK-345375K	KNOB VOLUME (H)
5-11	BD-351612A	LID
5-11P	BD-351612B	LID-P
5-11B	BD-351612C	LID-B
5-12	SP-351611A	COVER UPPER
5-12P	SP-351611B	COVER UPPER-P
5-12B	SP-351611C	COVER UPPER-B

INDEX

PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
BA-T2065A020A	2-1U	ET-349608	2-TR5	ZG-749268	1-72		
BA-T2065A020B	2-1C	ET-349608	2-TR6	ZS-304022	4-2		
BA-T2065A020C	2-1V	ET-353316	2-TR13	ZS-325495	4-11		
BA-T2065A020D	2-1E	ET-354083	2-TR101	ZS-331567	4-10		
BB-353302	1-1	EV-337861	2-VR5	ZS-352120	4-8		
BD-351609C	5-1	EV-337993	2-VR2	ZS-536488	1-112		
BD-351609D	5-1P	EV-337993	2-VR4	ZS-749292	1-113		
BD-351609F	5-1B	EV-337995	2-VR6	ZS-749293	1-114		
BD-351612A	5-11	EV-337996	2-VR3	ZW-305013	4-16x		
BD-351612B	5-11P	EV-338588	2-VR1	ZW-413188	4-3x		
BD-351612C	5-11B	EV-348314	2-VR101	ZW-698308	4-12x		
BF-712807	1-37	EW-305691	4-4C				
BL-712799	1-28	EW-306428	4-4U				
BM-713180	1-94	EW-336923	4-4E				
BR-712801	1-29	EW-346249	4-4B				
BR-712802	1-30	EW-347898	4-4S				
BT-353298	4-1U	EZ-631945	4-5				
BT-353299	4-1C	HE-337047	1-93				
BT-353300	4-1E	HP-712824	1-92				
BT-353301	4-1B	MB-351605	4-15				
EC-320548	2-C101U	MB-712818	1-57				
EC-338411	2-C101E	MB-712819	1-58				
EC-345817	2-C59	MB-712820	1-59				
EC-516723	2-C11	MC-353312	4-14				
EC-516723	2-C13	MI-711710	1-35				
ED-301911	2-D5	MI-712803	1-32				
ED-301911	2-D6	MI-712804	1-33				
ED-301911	2-D7	MI-712812	1-46				
ED-331198	2-D9	MI-712813	1-47				
ED-348055	2-D3	MI-712814	1-48				
ED-349662	2-D8	MI-712815	1-49				
ED-349662	2-D2	MI-712817	1-56				
ED-349662	2-D1	ML-712806	1-36				
ED-349662	2-D4	ML-712809	1-40				
ED-353290	3-D3	MV-712797	1-24				
ED-353290	3-D1	MZ-353159B	4-13				
ED-353290	3-D2	MZ-712808	1-39				
ED-353291	3-D5	SA-202118	4-9				
ED-353291	3-D4	SK-343017B	5-2P				
ED-353291	3-D6	SK-343017C	5-2				
ED-353292	3-D7	SK-343017F	5-2B				
EF-308847	4-17C	SK-345375H	5-10				
EF-602550	4-17U	SK-345375J	5-10P				
EH-353297	2-FL1	SK-345375K	5-10B				
EI-337228	2-IC3	SK-349496A	5-4B				
EI-349196	2-IC2	SK-349496B	5-5B				
EI-349590	2-IC1	SK-349496C	5-6B				
EI-353289	3-IC1	SK-349496D	5-7B				
EJ-343380	2-J2	SK-349496E	5-8B				
EJ-347631	2-J1	SK-349496F	5-9B				
EJ-347664	2-J3	SK-349496G	5-4				
EJ-698051	2-J201	SK-349496H	5-5				
EO-315758	2-FL4	SK-349496J	5-6				
EO-337044	2-FL2	SK-349496K	5-7				
EO-347162	2-FL3	SK-349496L	5-8				
EO-353311	2-T1	SK-349496M	5-9				
ER-315389	3-R1	SK-349496N	5-4P				
ER-333698	2-R78	SK-349496P	5-5P				
ER-351221	2-R33	SK-349496Q	5-6P				
ER-353317	2-R1	SK-349496R	5-7P				
ES-305733	4-6	SK-349496S	5-8P				
ES-337902	2-SW101	SK-349496T	5-9P				
ES-353295	2-SW3	SK-351613A	5-3				
ES-353310	2-SW1	SK-351613B	5-3B				
ES-353708	2-SW2	SP-351610F	4-7U				
ES-354557	2-SW201	SP-351610G	4-7C				
ES-713178	1-99	SP-351610H	4-7E				
ES-713179	1-128	SP-351610J	4-7V				
ET-308977	2-TR10	SP-351610K	4-7B				
ET-308977	2-TR11	SP-351611A	5-12				
ET-328558	2-TR12	SP-351611B	5-12P				
ET-328578	2-TR3	SP-351611C	5-12B				
ET-328578	2-TR4	SZ-645186	1-127				
ET-328578	2-TR14	TC-349493	1-126				
ET-331279	2-TR201	TC-712810	1-43				
ET-348931	2-TR2	TC-712811	1-44				
ET-349080	2-TR7	TC-712823	1-85				
ET-349081	2-TR8	ZG-712816	1-53				
ET-349081	2-TR9	ZG-712821	1-73				
ET-349081	2-TR1	ZG-712822	1-79				

AKAI MODEL HX-A2 PC BOARD SCHEMATIC DIAGRAM

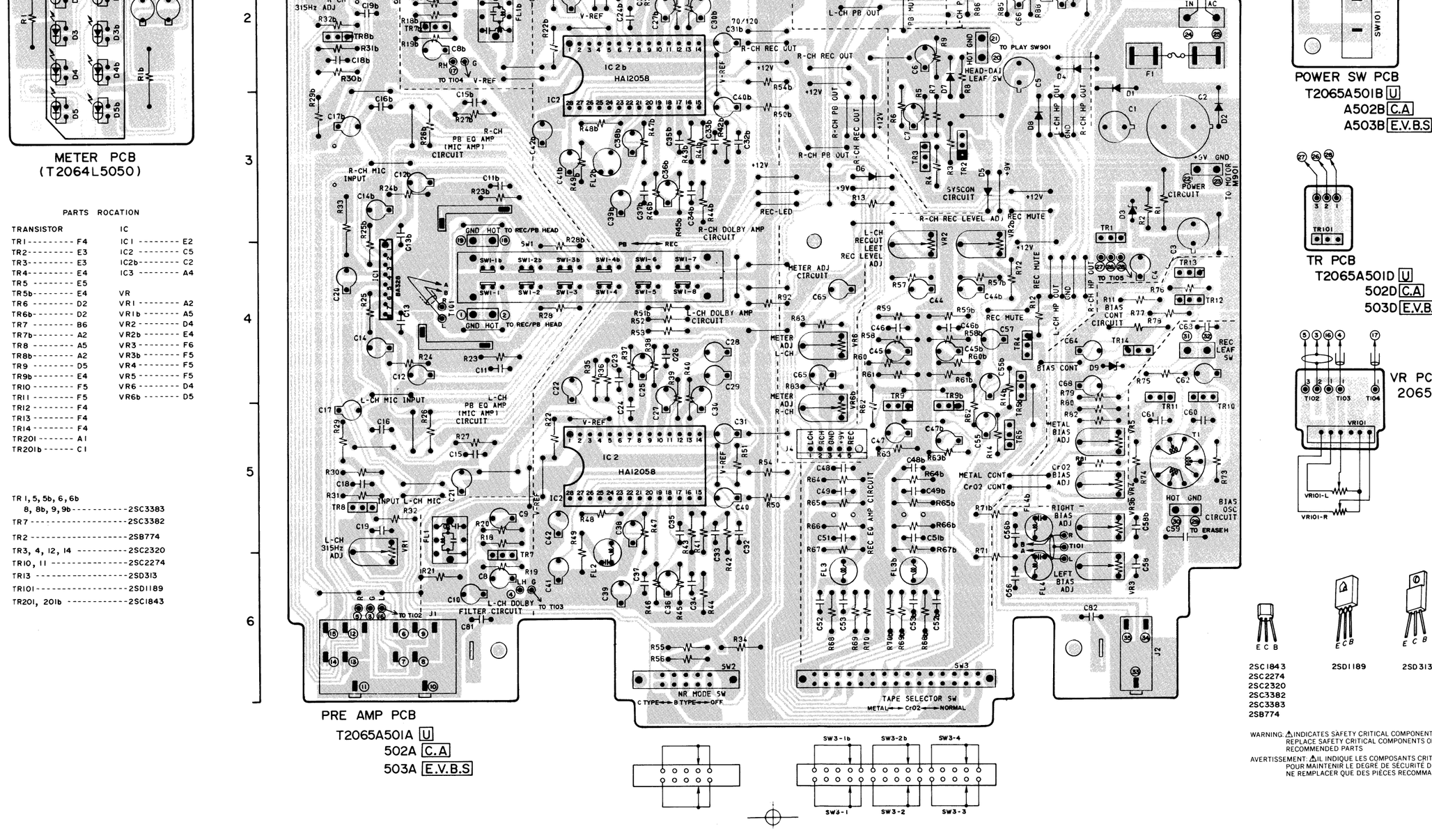


METER PCB
(T2064L5050)

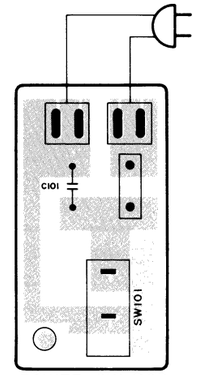
PARTS ROCATION

TRANSISTOR		IC	
TR1	F4	IC1	E2
TR2	E3	IC2	C5
TR3	E3	IC2b	C2
TR4	E4	IC3	A4
TR5	E5		
TR5b	E4	VR	
TR6	D2	VR1	A2
TR6b	D2	VR1b	A5
TR7	B6	VR2	D4
TR7b	A2	VR2b	E4
TR8	A5	VR3	F6
TR8b	A2	VR3b	F5
TR9	D5	VR4	F5
TR9b	E4	VR5	F5
TR10	F5	VR6	D4
TR11	F5	VR6b	D5
TR12	F4		
TR13	F4		
TR14	F4		
TR201	A1		
TR201b	C1		

TR 1, 5, 5b, 6, 6b
8, 8b, 9, 9b ---------- 2SC3383
TR7 ---------- 2SC3382
TR2 ---------- 2SB774
TR3, 4, 12, 14 ---------- 2SC2320
TR10, 11 ---------- 2SC2274
TR13 ---------- 2SD313
TR101 ---------- 2SD1189
TR201, 201b ---------- 2SC1843



PRE AMP PCB
T2065A501A [U]
502A [C.A]
503A [E.V.B.S]



POWER SW PCB
T2065A501B [U]
A502B [C.A]
A503B [E.V.B.S]

TR PCB
T2065A501D [U]
502D [C.A]
503D [E.V.B.S]

VR PCB
2065A501C [U]
502C [C.A]
503C [E.V.B.S]

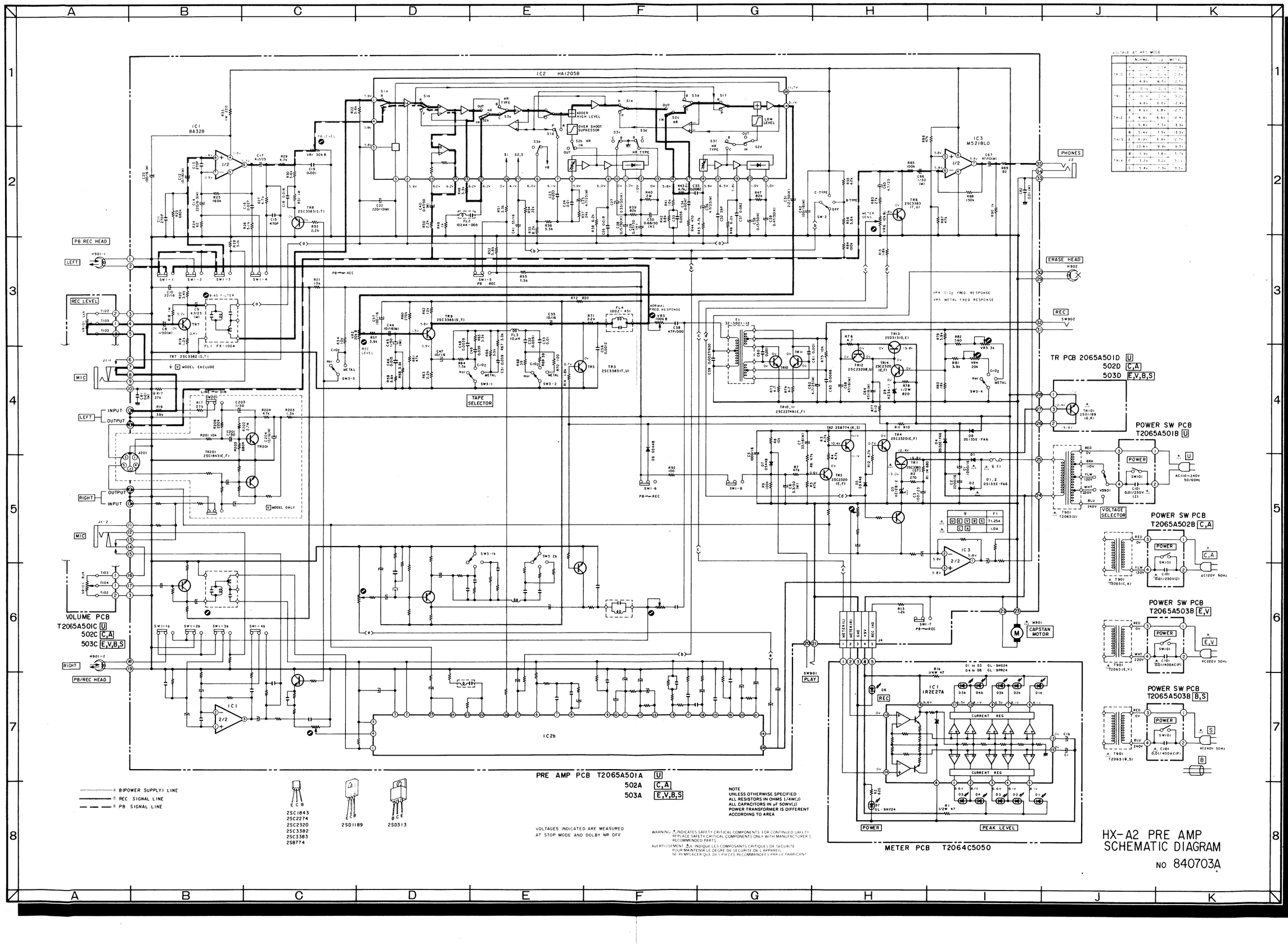
2SC1843
2SC2274
2SC2320
2SC3382
2SC3383
2SB774

2SD1189

2SD313

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT


IC2 HA1205B
IC1 BA328
IC3 M5218L0
PB REC HEAD
LEFT
RIGHT
REC LEVEL
MIC
INPUT
OUTPUT
VOLUME PCB T2065A501C U 502C C,A 503C E,V,B,S
PB/REC HEAD
TAPE SELECTOR
PHONES J2
ERASE HEAD H902
REC SW902
CAPSTAN MOTOR
SW901 PLAY
TR PCB 2065A501D U 502D C,A 503D E,V,B,S
POWER SW PCB T2065A501B U
POWER SW PCB T2065A502B C,A
POWER SW PCB T2065A503B E,V
POWER SW PCB T2065A503B B,S
VOLTAGE SELECTOR
AC110~240V 50/60Hz
AC120V 60Hz
AC220V 50Hz
AC240V 50Hz
METER PCB T2064C5050
PEAK LEVEL
POWER
REC
PRE AMP PCB T2065A501A U 502A C,A 503A E,V,B,S
= B(POWER SUPPLY) LINE
= REC SIGNAL LINE
= PB SIGNAL LINE
2SC1843 2SC2274 2SC2320 2SC3382 2SC3383 2SB774
2SD1189
2SD313
VOLTAGES INDICATED ARE MEASURED AT STOP MODE AND DOLBY NR OFF
NOTE UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN OHMS 1/4W(J) ALL CAPACITORS IN μF 50WV(J) POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA
WARNING ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT
HX-A2 PRE AMP SCHEMATIC DIAGRAM
NO 840703A